

Impact of a Stuttering Disorder on How Individuals Are Perceived and Factors That Affect this Perception

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Introduction

- About 10% of adults in the United States experience a speech, language, or voice problem every year (National Health Interview Survey, 2012).
- Previous research has looked at the perceptions that individuals hold towards those with speech difficulties, using different methodologies:
 - In Williams et al. (2001), a description of an individual mentioned a speech difficulty or made no mention of their speech
 - Allard and Williams (2008) featured a voice recording of an actor depicting various speech difficulties or normal speech
- These studies had participants use a Likert scale to rate a target on nine traits: intelligence, self-esteem, decisiveness, reliability, emotional stability, social adjustment, stress, employability, and ambition
- Characteristics of participants that may impact ratings, such as age, gender, environment they grew up in, and knowledge of communication disorders, also have been measured. However, results of various studies have shown no general agreement to their impact (Dietrich et al, 2001; Allard & Williams, 2008).
- The current study investigates whether stereotypes about those with speech disorders will be triggered through a written transcript that does not explicitly state that the target has a stuttering disorder. Additionally, the current study adds empathy as an additional factor within the participant which may affect their ratings of the target.
- Approximately 1% of the population suffers from a stuttering disorder (Walden & Lesner, 2018), making it a good target for research.

Summary of Hypotheses

- H1:** Participants will rate individuals with a stuttering disorder less favorably than participants without a stuttering disorder, for both male and female target conditions.
- H2:** Male targets with a stutter will be rated more favorably than female targets with a stutter on the traits of intelligence, decisiveness, reliability, stability, ambition, and employability.
- H3:** There will be a positive correlation between participants' scores on negative empathy and how favorably they rate targets who have a stuttering disorder.

Method

- Participants were 155 undergraduate students (female = 128, male = 21, non-binary/other = 6) from an American university who were enrolled in various psychology courses. Students received extra credit for their participation.
- Each participant read 1 of 4 versions of a transcript of a job interview depicting a non-stuttering male, a stuttering male, a non-stuttering female, or a stuttering female. Contents of each transcript were identical, varying only in the name of interviewee (Nicholas or Nicole) and stuttering, which was indicated by the repetition of words/letters.
- Participants rated the target on the set of 9 traits established in previous studies. Each trait was rated on a 7-point scale (e.g., 1 = *Not Intelligent*, 7 = *Highly Intelligent*). Additionally, they completed an empathy scale that yields scores for positive, negative, and neutral empathy (Andreychik & Migliaccio, 2015).
- Demographic questions included age, gender, predominant environment growing up, and their experience with people with communication disorders.

Results and Discussion

Hypothesis 1

- Results only partially support Hypothesis 1. Participants rated targets with a stutter less favorably only for the traits of self-esteem, decisiveness, social adjustment and stress level, as shown in Table 1.
- The current study found more traits associated with a fluency disorder as compared to a no disorder condition. Previous research only found differences between these groups for self-esteem and social adjustment. One possible explanation is that participants were stereotyping the individual covertly rather than making blatant judgements, such as regarding their intelligence. Another possibility is participants may have assumed that the stuttering was simply a sign of stress and lack of speaking skills, rather than indicating an actual speech disorder.

Hypothesis 2

- Results did not support Hypothesis 2, that stuttering males would be rated more favorably than stuttering females on specific traits. The only trait that showed a significant difference for target gender was stress, which was involved in a 3-way interaction between subject gender, speech condition, and target gender.
- These results were surprising, since males are often assumed to be more decisive and ambitious, and the other traits could easily relate to those. However, it is possible that the presence of a speech disorder has a strong enough impact to negate the bias in favor of males that exists under normal conditions. More research is needed to establish scenarios where this stereotype is and/or is not present.

Table 1

Mean Ratings for 9 Personality Traits By Speech Condition

Trait	Non-Stuttering Target		Stuttering Target	
	M	SD	M	SD
Intelligence	5.68	1.05	5.53	0.98
Self-Esteem**	5.32	1.20	3.53	1.34
Decisiveness *	5.14	1.23	4.23	1.21
Reliability	5.54	1.31	5.11	1.06
Emotional Stability	4.51	1.72	4.13	1.27
Employability	5.68	1.29	5.31	1.20
Ambition	5.64	1.36	5.32	1.15
Social Adjustment**	5.51	1.29	3.95	1.36
Stress**	3.56	1.67	5.31	1.11

Note: Items were rated on a 7-point scale (“*Not*” to “*Highly*”). Starred items showed a significant effect of stuttering condition.

* $p < .05$ ** $p < .0001$

Table 2

Correlations Between Empathy Sub-Scores and Trait Ratings for a Stuttering Target

	Positive Empathy	Negative Empathy
Intelligence	.147	.013
Self-Esteem	-.256*	-.267*
Decisiveness	.031	-.192
Reliability	.067	.025
Emotional Stability	.002	.091
Employability	.093	.021
Ambition	.086	.055
Social Adjustment	-.082	-.238*
Stress	.034	.035

* $p < .05$

Hypothesis 3

- Hypothesis 3, which involved the empathy levels of the rater, was also not supported by the data (see Table 2). Significant correlations were found with ratings of self-esteem and social adjustment, however, they were opposite the expected direction with participants scoring higher on negative empathy rating stuttering targets less favorably on these traits.
- While we expected participants to rate targets higher on these traits due the negative empathy, this association also makes sense. Individuals who score higher on negative empathy feel more of the negative emotions of others, so they may understand the social impact a stuttering disorder may have on a person and therefore rate targets based on how **they** would feel in the situation.

Limitations and Future Directions

- Limitations— due to current conditions, the study had to be given via an online format, Qualtrics. Participants may have been distracted by numerous extraneous variables which kept them from giving their full attention to reading the transcript. Giving the study in-person would eliminate these variables affecting attention.
- Future Directions— while we have speculated that the results may be due to covert biases, the reasons for results is not truly known. Future studies may focus more on why participants gave the responses they did—did they recognize the target as having a speech difficulty or did they attribute the stutter to another cause, such as nerves during the interview?

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